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STOCK ASSESSMENT METHOD AND FINANCIAL DATA IN SOME PRODUCTION COMPANIES

BY

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ABSTRACT

The study examined the effect of stock assessment methods on financial data in selected production companies in Rivers State, Nigeria. The study was motivated by the increasing concern over the absence of a universally accepted stock assessment technique and the effect of different valuation methods on financial statements, taxation, and investment decisions. Specifically, the study sought to determine whether stock assessment methods influence assessable income tax, examine the effect of prevailing economic conditions on the choice of stock assessment methods, and evaluate the extent to which variations in stock assessment methods affect the financial data positions of production companies.A survey research design was adopted for the study. Data were collected from three selected production companies namely Emenite Limited, Innoson Technical and Industrial Company Limited, and AloAluminumproduction Company Limited. Both primary and secondary sources of data were utilized. The primary data were obtained through questionnaires and oral interviews, while secondary data were sourced from textbooks, journals, and other relevant materials. A sample size of 142 respondents was determined using the Taro Yamane formula, and the data collected were analyzed using simple percentages, regression coefficient analysis, and Z-test statistical techniques.The findings revealed that stock assessment methods significantly affect financial statements, tax assessment, cost of goods sold, and closing stock values. The study further discovered that the Last-In-First-Out (LIFO) method is more suitable during inflationary periods, while the weighted average method provides a balanced and realistic valuation approach. The study concluded that consistency and proper disclosure of stock assessment methods are essential for presenting a true and fair view of financial statements. Consequently, the study recommended the adoption of the weighted average method for production companies.

Keywords: inventory valuation, financial reporting, cost of goods sold, manufacturing companies, Nigeria.

INTRODUCTION

stock assessment allows companies to provide a monetary value for items that make up their inventory (stock). Inventories are usually the largest current asset of a business and are as important as funds (cash). It is a form of fund tied up in assets (current assets). It's proper or accurate measurement or valuation cannot be overlooked as it forms a greater percentage of an enterprise‟s current assets in particular and a total asset in general. For production companies, inventories usually represent approximately 20 to 60 percent (%) of their assets. If inventory is not properly valued, it may result that expenses and revenue may as well not be properly matched and a company could make poor business decisions that will affect the company‟s profit. It is essential the way assets are valued because it could be attributable to the numerous benefits which an organization stands to gain by keeping an accurately valued stock that meet shareholders needs, demands for financial information and also the relevant specification of a particular organization.

However, it will be a waste of time if the record accuracy is poor.

Inventory in production company or concern comprises of the following components:

- Raw materials inventory
- Work- in- progress (semi-finished goods) inventory
- Finished goods inventory

These components show the relationship between production and sales, and it enables an organization to offer better service to its customers at a reasonable price.

However, the technique or method used in the valuation of inventories varies and the values placed on inventories vary in time with the prevailing economic parameters (inflation, deflation or static economy) and it can also be influenced by the management policy of the organization. For instance, if the objective of an enterprise is that of profit maximization, it may result to the use of a particular method so as to disclose lower profit, thereby using excess fund at its disposal to expand its operations. This type of organization may discard other methods of valuing inventories in favour of the method that suits its objectives.

According to Nwoha (2006:69), no area of accounting has produced wider difference in practice than the computation of amount at which inventories (stocks) and work-in-progress as stated in financial account.

stock assessment method used by an enterprise is determined by a number of reasons. These include inflation, differences in quantity discounts, frequent changes in prices of commodity, buying from different suppliers and also the nature of items or product. For instance a company that deals on perishable goods, let‟s say a grocery store, prefers an stock assessment method that recognizes the out flow of goods that were first in stock. This arises as a result of the perishability of the items treated and the high turnover rate could also be accounted for this choice of method FIFO (first-in, first-out). The level of the three component of the inventory stated earlier differs among organizations depending on the nature and volume of operation undertaken. production companies have a high level of raw material inventory and semi-finished goods inventory as it is found in the grocery stores. Considering the large sums of money tied up in inventory as earlier stated, Horngren and Foster (2004:756) pointed out that it is pertinent to have an “information model” as a result of the obvious fact that if stock matters (receipts, issues and controls) are not properly handled, it would go a long way to jeopardize the financial status (liquidity) as well as the profitability position of the firm. Hence, this research work is a step in the right direction to address and highlight the role of account professional towards the achievement of choosing and adopting appropriate stock assessment methods for each group of industry.

RESEARCH METHODOLOGY

INTRODUCTION

In this chapter, the issue that would be considered are as follows:

Research design, area of the study, population of the study, sample size and sampling techniques instrument of data collection, validity of instrument, reliability of the instrument, method of data collection and method of data analysis.

RESEARCH DESIGN

This research work consists of a survey research design. For the purpose of carrying out a sound analysis and then arriving at a reasonable conclusion, this work entails the collection of data using both the primary and secondary sources of data collection.

PRIMARY SOURCES

The primary data used for this research work were gotten from the companies used as a case study in this research work and this was done through the use of questionnaire and oral interview.

SECONDARY SOURCES

The secondary data were extracted from textbooks and other related materials which included journals, internet browsing. To assist the researcher to tend credibility to facts, as well as the authenticity of this work the following libraries were used in the course of this research work.

Rivers state library

Caritas university library

Data collected during this work were restricted to experts in the area of my interest and standard textbooks that are internationally recognized and accepted. Citations were made where appropriate.

POPULATION OF THE STUDY

The population for this study consisted of 3 selected production companies which are Innosontechnical and industrial company limited, Emenite limited, Aloaluminumproduction company limited all in Rivers state. The infinite population of this study which consists of all workers of the 3 companies were over 3000. But the population which shall be considered in the course of this work (finite population) is 220 which consist of accountants, directors, managers, and stake holders of the 3 companiesput together.

SAMPLE SIZE AND SAMPLING TECHNIQUE

Sample is a small group of element or subject drawn from a definite or specified population.

Sampling involves the process by which the subject or object of the observation is drawn from a large sect and studied in other to make references about the characteristics of the large population. Simple random sampling technique was used to select the participants. This every member of the population had an equal chance of being selected.

The sample sized was statistically determined using "Taro Yamane" formula

$$\boldsymbol{n = \frac{N}{1 + N(e)^2}}$$

Where

n =Sample size

N=Finite population

1 =Constant

Level of significance or limit of tolerable error

e =(0.05 or 5%)

From the total population of the study which was 220, the Taro Yamane formula will be used to estimate the size

$$\boldsymbol{n = \frac{N}{1 + N(e)^2}}$$

Where

n = ?

N = 220

1 = Constant unit

e = 0.05

$$n = \frac{220}{1 + 220(0.05)^2}$$

$$\text{n} = \frac{220}{1 + 220(0.0025)}$$

$$n = \frac{220}{1 + 0(0.55)}$$

$$n = \frac{220}{1.55}$$

n =141.9 Ω 142

therefore out of the population of 220, 142 was gotten as a sample size.

Below is a table showing the sample size of the 3 companies.

Companies	Accountant	Directors	Managers	Stakeholder	Marketers	Total
Innoson	12	6	11	7	8	44
Emenite	16	8	15	8	8	55
Alo aluminium	13	6	11	6	7	43
Total	**41**	**20**	**37**	**21**	**23**	**142**

Sourced: survey 2020

INSTRUMENT OF DATA COLLECTION

The instrument used for this research were personal interview and use of questionnaire. Personal interviews had to do with asking questions order to gather required information that is centered on this study. It involved going from one respondent to another.

Questionnaires involved presenting some relevant questions in respect to the research work. The questions in the questionnaire were primarily framed and revolved around the three (3) hypotheses that are meant for this research. They were prepared cautiously to ensure that questions will not be misunderstood by the respondents.

VALIDITY OF THE INSTRUMENT

According to Anyanwu (2000), validity refers to the degree to which a measuring instrument measures what it is designed to measure.

The face validity was carried out by giving questionnaires to supervisor who went through the questions drafted and made appropriate suggestions and corrections that helped meet the validity and this brought the items on the questionnaire to 12 out of the initial 17 that was drafted.

The content validity was also carried out by my supervisor, lecturers and experts in the field to ensure that the research work was in line with what it is actually talking about and this was done by going through the written work before completion and was approved valid.

RELIABILITY OF INSTRUMENT

This is a test or measure of the extent to which a research instrument will yield the same results under the same conditions, that is the consistency of the work.

For the reliability of the instrument a pilot survey was carried out to test the questionnaires that were distributed on a similar sample from the criteria for the selection of subject met by the subject.

METHOD OF DATA COLLECTION

Questionnaires were administered directly by the researcher by the help of the management to respondents that are staffs of the selected companies. The researcher ensured that there was no double issuance of questionnaires so as to avoid loss of questionnaires. The questionnaires were left with the respondents so as to allow for privacy.

METHOD OF DATA ANALYSIS

In the study of this work, all the questionnaires retrieved were scrutinized and analyzed based on simple percentages. Tables were used where necessary to avoid rough presentation of information (data) and after this, the hypotheses formulated were tested with the "regression coefficient analysis" method and also the Z – test was used.

The regression co –efficient analysis method was adopted for this research because the researcher talked on the "impact of stock assessment methods has on the financial report statements of production companies.

The regression co – efficient formular is stated thus:

$$b = \frac{\sum X_1 Y_1 - nxy}{\sum X_1^2 - nx^2}$$

a = Y – bX

Where

b = slope of the line or the gradient

Y = variation of x in regression line

X = a given value

X_IY_I = The score of the respondent population

XY = Mean score of the respondent population

X^2 = Variance of score X

Y^2 = Variance of score Y

n = Number of respondent

a = relationship of X and Y

To determine the relationship the above formula is used

Y = a + b

$$S_b = \sqrt{\frac{S_{ee}}{\sum X_1^2 - n\overline{x^2}}}$$

Where See = the standard error of estimate

$$S_{ee} = \sqrt{\frac{\sum Y_1^2 - a\sum Y_1 - b\sum X_1 Y_1}{n-2}}$$

After S_b has been calculated, the Z-test table value would be used against the Z

calculated value.

Test statistics

$$Z = \frac{b}{S_b}$$

DECISION RULE

Reject Null Hypothesis if calculated value is greater than table value.

4.1DATA ANALYSIS

In this study a total number of 142 questionnaires were distributed to respondents which represents 100%, out of which 128 representing 90% were recovered while 14 representing 10% were not recovered. 8 representing 6% of the 128 were invalid and discarded. Therefore the total number of questionnaire presented and analyzed where 120.

Table 4.1.1

Questionnaires	**Observations**	**Percentage %**
No issued	142	100%
Recovered	128	90%
Un recovered	14	10%
Invalid & Discarded	8	6%
Valid	**120**	

From the table above it can be seen that only 120 questionnaires recovered were valid therefore the analysis will be done based on this figure.

QUESTION ONE

stock assessment method does not have any impact on the assessable income tax of your company.

Table 4.1.2

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	11	20	31	35%	65%
Directors	10	21	31	32%	68%
Managers	6	14	20	30%	70%
Stakeholders	7	13	20	35%	65%
Marketers	6	12	18	33%	67%
TOTAL	**40**	**80**	**120**		

In analyzing the responses of the respondent, in the statement made above, 40 respondents which includes (Accountants, Managers, Directors, Stakeholders and Marketers) agreed with the statement while 80 disagreed.

QUESTION TWO

Economic parameters (inflation, deflation and static economy) has no effect on thechoice of stock assessment method used in a firm.

Table 4.1.3

RESPONDENT	AGREED	DISAGREED	TOTAL	%AGREED	%DISAGREED
Accountants	11	20	31	35%	65%
Directors	7	13	20	35%	65%
Managers	13	18	31	42%	58%
Stakeholders	9	11	20	45%	55%

Marketers	7	11	18	39%	61%
Total	**47**	**73**	**120**		

From the table above 47 respondents agreed to the question asked and 73 respondents disagreed.

QUESTION THREE

The use of different methods in a firm has no effect on the financial report statement.

Table 4.1.4

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	11	20	31	35%	65%
Directors	6	14	20	30%	70%
Managers	13	18	31	42%	58%
Stakeholders	8	12	20	40%	60%
Marketers	7	11	18	39%	61%
TOTAL	**45**	**75**	**120**		

The above table shows that 45 respondents agreed to the question and 75 respondents disagreed.

QUESTION FOUR

A firm should be inconsistent with the application of stock assessment methods adopted for comparison of financial statement.

Table 4.1.5

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	9	22	31	29%	71%
Directors	7	13	20	35%	65%
Managers	11	20	31	35%	65%
Stakeholders	7	13	20	35%	65%
Marketers	7	11	18	39%	61%
Total	**41**	**79**	**120**		

From the question asked above and responses given by the respondents, the table shows that 41 respondents agreed to the question while 79 respondents disagreed.

QUESTION FIVE

Inventory valuation methods play no significant role in ensuring the firm's accountability.

Table 4.1.6

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	9	22	31	29%	71%
Directors	8	12	20	40%	60%
Managers	11	20	31	35%	65%
Stakeholders	7	13	20	35%	65%

Marketers	5	13	18	28%	72%
Total	**40**	**80**	**120**		

The table above shows that 40 respondents agreed to the question while 80 respondents disagreed.

QUESTION SIX

The nature of stock does not affect the method of stock assessment used in a company.

Table 4.1.7

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	9	22	31	29%	71%
Directors	7	13	20	35%	65%
Managers	11	20	31	35%	65%
Stakeholders	7	13	20	35%	65%
Marketers	7	11	18	39%	61%
Total	**41**	**79**	**120**		

This table shows that 41 respondent agreed while 79 of the respondents disagreed to the question.

QUESTION SEVEN

The same valuation method should not be used to issue stork to production and customers respectively.

Table 4.1.8

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	11	20	31	35%	65%
Directors	7	13	20	35%	65%
Managers	13	18	31	42%	58%
Stakeholders	9	11	20	45%	55%
Marketers	7	11	18	39%	61%
Total	**47**	**73**	**120**		

The table above shows that 47 respondents agreed to the question asked above while 73 respondents disagreed.

QUESTION EIGHT

The stock assessment method used by the company does not make company pay more or less tax.

Table 4.1.9

RESPONDENT	AGREED	DISADREED	TOTAL	%AGREED	%DISAGREED
Accountants	7	24	31	35%	77%
Directors	7	13	20	35%	65%
Managers	11	20	31	35%	65%
Stakeholders	7	13	20	35%	65%
Marketers	7	11	18	39%	61%
Total	**39**	**81**	**120**		

QUESTION NINE

What method of stock assessment does your company use?

The summary of the responses to this question shows that the three companies maintain three different methods of stock assessment. The responses shows that Innoson technical and industrial company limited uses the average price method, Emenite limited uses the first – in – first – out method (FIFO) while Alo aluminum uses the last – in – first – out (LIFO) method.

QUESTION TEN

Is there any method(3) you know which is/ are recommended by the relevant tax authority?

From the summary gotten from the responses by the respondent it is evident that first – in –first – out method and average cost method are recommended by international accounting standard (IAS) 2 and statement of standard accounting principle (SSAP) 9.

QUESTION ELEVEN

Is there any regulatory body or legislation imposing any identifiable method?

The summary of responses gotten from the respondents shows that there is no body that is imposing any identifiable method of stock assessment.

QUESTION TWELVE

What do you recommend generally to help improve and give adequate attention to stock assessment method is companies?

From the summary of responses gotten from the respondents, it could be said that any stock assessment used by a firm should not be that which yields more gain to the tax authorities and bring losses to the firm.

A more practical illustration shall be examined below to test the validity of these responses. We shall take on instance, considering the following three production companies used as case study in this research work.

Innoson technical and industrial company limited, Emenite limited and Alo Aluminum. These three companies are into production but value their inventories using weighted average method, FIFO and LIFO method respectively.

The following data relate to the operations of each of these companies for the year ended 30th June 20x2. It shows consignments of materials received and their issuances to customers as sales.

July 1, 20x2: inventory at beginning 500 units @ ₦50/unit

July 10, 20x1: received 6000 units @ ₦55/unit

August 5, 20x1: received 4000 units @ ₦60/unit

September 12, 20x1: issued to customers 6000 units

October 11, 20x1: received 10000 units @ ₦70/unit

November 8, 20x1: received 9000 units @ ₦75.50/unit

February 2, 20x2: issued 7500 units

March 4, 20x2: received 5000 units @ ₦80/unit

May 24, 20x2: issued to customers 11,500 units

June 10, 20x2: issued to customers 4000 units

Additional information:	₦
Turn over	3,560,000
Depreciation	165,000
Income from other sources	80,000
Admin expenses	100,000
Tax rate	30%

We wish to find out the impact of each method on the financial statement through the closing balance values.

TABLE 4.1.10

INNOSON TECHNICAL AND INDUSTRIAL COMPANY LIMITED STORES LEDGER ACCOUNT USING WEIGHTED AVERAGE

RECEIPTS	ISSUE	BALANCE

Date	Particular	Quantity	Unit price	Amount	Quantity	Unit price	Amount	Qty	U.P	Amount
			₦	₦		₦	₦		₦	₦
20X1, JULY 1	Beginning inventory							5,000	50	250,000
20x1, July 1o	Receipt	6000	55	330,000				11,000	52.73	580,000
20x1, Aug 5	Receipt	4000	60	240,000				15,000	54.67	820,000
20x1, Sept 12	Issue				6,000	54.67	328,020	9,000	54.66	491,980
20x1, Oct 11	Receipt	10,000	70	700,000				19,000	62.74	1,191,980
20x1, Nov 8	Receipt	9,000	75.5	679,500				28,00	66.84	1,871,480
20x2, Feb 2	Issue				7500	66.84	501,300	20,500	66.84	1,370,180
20x2, March 4	Receipt	5,000	80	400,000				25,500	69.42	1,770,180
20x2, May 24	Issue				11,500	69.42	798,330	14,000	69.42	971,850
20x2 June 6	Issue				4,000	69.42	277,680	10,000	69.42	694,170
	Total	34,000		2,349,500	29,000		1,905,330			

Value of closing stock = 5,000 units @ ₦80 and 5,000 @ ₦75.50 =₦777,500

TABLE 4.1.12

ALO ALUMINUM production COMPANY LIMITED STORES LEDGER ACCOUNT USING LIFO METHOD

		RECEIPTS			ISSUE			BALANCE		
Date	Particular	Quantity	Unit price	Amount	Quantity	Unit price	Amount	Qty	U.P	Amount
			₦	₦		₦	₦		₦	₦
20X1, JULY 1	Beginning inventory							5,000	50	250,000
20x1, July 1o	Receipt	6000	55	330,000				11,000		580,000
20x1, Aug 5	Receipt	4000	60	240,000				15,000		820,000
20x1, Sept 12	Issue				6,000	4000 @ 60 =240,000 2000 @ 55 = 110,000	350,000	9,000		470,000
20x1, Oct 11	Receipt	10,000	70	700,000				19,000		1,170,000
20x1, Nov 8	Receipt	9,000	75.5	679,500				28,00		1,849,500
20x2, Feb 2	Issue				7500	75.50	566,250	20,500		1,283,250
20x2, March 4	Receipt	5,000	80	400,000				25,500		1,683,250
20x2, May 24	Issue				11,500	5000 @ 80 =400,000 1500 @ 75.50 = 113,250 5000 @ 70 =	863,250	14,000		820,000

						350,00				
20x2 June 6	**Issue**				**4,000**	**70**	**280,000**	**10,000**		**540,000**
	Total	**34,000**		**2,349,500**	**29,000**		**1,959,500**			

Value of closing stock = 5,000 units @ ₦50 and 4000 units @ ₦55 and 1000 unit @ ₦70 is equal to ₦540,000

Table 4.1.13 THE IMPACT OF THE DIFFERENTstock assessment METHODS ON THE FIRMS FINANCIAL REPORT STATEMENT (INCOME STATEMENT). COMPARATIVE INCOME STATEMENT FOR THE YEAR ENDED 30TH JUNE 20X2

PARTICULAR	INNOSON TECH	EMENITE	ALO
	₦	₦	₦
Turn over(sales)	3,560,000	3,560,000	3,560,000
Less: cost of goods sold:			
Opening inventory	250,000	250,000	250,000
Add: purchases	2,349,000	2,349,000	2,349,000
COGAS	2599500	2599500	2599500
Less: closing inventory	(694170)	(777,500)	(540,000)
COGS	1,905,330	1,822,000	2,059,500
Gross profit	1,654,670	1,738,000	1,500,500
Add: other incomes	80,000	80,000	80,000
	1,734,670	1,818,000	1,580,500
Less: expenses			
Depreciation	(165,000)	(165,000)	(165,000)
Admin expenses	(100,000)	(100,000)	(100,000)
Net profit before tax	1,469,670	1,553,000	1,315,500
Less: tax @ 30%	(440,901)	(465,900)	(394,650)
Net profit after tax	1028769	1,087,100	920,850

The analysis done above has shown different values for closing inventory, cost of goods sold, assessable profit (profit before tax) and the taxation of these companies as well as their profit after tax.

Table 4. 1. 14 below will give you a better presentation of the difference gotten from the three companies in a tabular form so as to enable a better comparison.

TABLE 4. 1. 14

Comparisonof closing stock, cost of goods sold, profit before tax, taxation and profit after tax. Using FIFO, LIFO and Weighted average methods.

COMPANY/ METHOD	CLOSING STOCK	COST OF GOODS SOLD	PROFIT BEFORE TAX	TAXATION	PROFIT AFTER TAX
INNOSON (WEIGHTED AVERAGE)	₦ 694,170	₦ 1,905,330	₦ 1,469,670	₦ 440,901	₦ 1,028,769
EMENITE (FIFO)	777,500	1,822,000	1553,000	465,900	1,087,100
ALO (LIFO)	540,000	2,059,500	1,315,500	394,650	920,850

Taking a closer look it can be seen that the FIFO method shows the highest closing inventory value followed by the weighted average method and lastly the LIFO method. These will inversely result in the cost of goods sold for FIFO being the lowest, followed by weighted and then LIFO method being the highest. With these values the profit before tax will take the same direction with the closing stock values. That is, with a high cost of goods sold, the LIFO method will report the lowest profit figure before tax whereas the FIFO method which has the lowest cost of goods sold will report the highest profit before tax figure. The weighted average method still maintains the middle profit before tax.

Finally, the company taxation as well as the profit after tax for the companies is highest using FIFO and lowest using LIFO method while the weighted average is still in between both levels.

4.2 TESTING OF HYPOTHESES

To carry out this study successfully, the following three (3) hypothesis formulated in the previous chapter (chapter one) of this research work shall be examined by subjecting them to some statistical test using the regression co-efficient analysis. This is to determine the validity or otherwise of the hypothesis

HYPOTHESIS ONE

H_O: stock assessment methods do not have any impact on the assessable income tax of Nigerian production companies.

H_1: stock assessment method has an impact on the assessable income tax of Nigerian production companies.

To test this hypothesis, the researcher used the responses on question one.

The data collected are presented on a table below.

Table 4.2.1

RESPONDENTS	**XI**	**YI**	$\mathbf{X_I^2}$	$\mathbf{Y_I^2}$	**XIYI**
ACCOUNTANTS	11	20	121	400	220
MANAGERS	10	21	100	441	210
DIRECTORS	6	14	36	196	84
STAKEHOLDERS	7	13	49	169	91
MARKETERS	6	12	36	144	72
TOTAL	∑	∑	∑	∑	∑

$\bar{X} = \frac{40}{5} = 8$

$\boldsymbol{\bar{Y} = \frac{80}{5} = 16}$

Formular:

$$\boldsymbol{b = \frac{\sum X_1 Y_1 - n\bar{X}\bar{Y}}{\sum X_1^2 - n\bar{X^2}}}$$

$$\boldsymbol{a = \bar{Y} - b\bar{X}}$$

$$\boldsymbol{b = \frac{677 - 5(8)(16)}{342 - 5(8)^2}}$$

$$\boldsymbol{b = \frac{677 - 640}{342 - 5(64)}}$$

$$\boldsymbol{b = \frac{37}{22}}$$

$$\boldsymbol{b = 1.68}$$

$$\boldsymbol{a = 16 - 1.68(8)}$$

$$\boldsymbol{a = 16 - 13.44}$$

$$\boldsymbol{a = 2.56}$$

$$\boldsymbol{Y = a + b}$$

$$\boldsymbol{Y = 2.56 + 1.68}$$

$$\boldsymbol{Y = 4.24}$$

Testing the significance of b

$$Sb = \frac{See}{\sqrt{\sum X_1^2 - n\overline{x^2}}}$$

Where See = the standard error of estimate

$$See = \frac{\sum Y_1^2 - a\sum Y_1 - b\sum x_1 Y_1}{n-2}$$

To get $S_b$we have to get out see (standard error of estimate)

$$See = \frac{1350 - 2.56(80) - 1.68(677)}{5-2}$$

$$See = \frac{1350 - 204.8 - 1137.36}{3}$$

$$See = \frac{7.84}{3}$$

$$See = 2.613$$

$$See = 1.617$$

$$Sb = \frac{1.617}{\sqrt{342 - 5(8)^2}}$$

$$Sb = \frac{1.617}{\sqrt{342 - 5(64)}}$$

$$Sb = \frac{1.617}{\sqrt{342 - 320}}$$

$$Sb = \frac{1.617}{\sqrt{22}}$$

$$Sb = \frac{1.617}{4.69}$$

$$Sb = 0.35$$

$$Z\ test = \frac{b}{Sb}$$

$$= \frac{1.68}{0.35}$$

$$= 4.8$$

Critical value of Z table as 3 degree of 5% level of significance is 0.9989

DECISION RULE:

Calculated value = 4.8

Table value = 0.9989

0.9989 < 4.8. therefore we reject the null hypothesis (Ho). This means that stock assessment methods has an impact on the assessable income tax of Nigeria production companies.

HYPOTHESIS TWO

H_{O2}: The prevailing Economic parameters does not influence the stock assessment methods used by Nigeria production companies.

H_{I2}: The prevailing Economic parameters influences the stock assessment methods used by Nigeria production companies.

To test this hypothesis, the researcher used the responses on question two. The data collected are presented on the table below

Table 4.2.1

RESPONDENTS	XI	YI	X_I^2	Y_I^2	XIYI
ACCOUNTANTS	11	20	121	400	220
MANAGERS	7	13	49	169	91
DIRECTORS	13	18	169	324	234
STAKEHOLDERS	9	11	81	121	99

MARKETERS	7	11	49	121	77
TOTAL	∑ **47**	∑	∑ **469**	∑ **1135**	∑

$$\overline{X} = \frac{47}{5} = 9.4$$

$$\overline{Y} = \frac{73}{5} = 14.6$$

Formular:

$$b = \frac{\sum X_1 Y_1 - n\overline{X}\overline{Y}}{\sum X_1^2 - n\overline{X^2}}$$

$$a = \overline{Y} - b\overline{X}$$

$$b = \frac{721 - 5(9.4)(14.6)}{469 - 5(9.4)^2}$$

$$b = \frac{721 - 686.20}{469 - 5(88.36)}$$

$$b = \frac{721 - 686.20}{469 - 441.8}$$

$$b = \frac{34.8}{27.2}$$

$$b = 1.28$$

$$a = 14.6 - 1.28(9.4)$$

$$a = 14.6 - 12.03$$

$$a = 2.57$$

$$Y = a + b$$

$$Y = 2.57 + 1.28$$

$$Y = 3.85$$

Testing the significance of b

$$Sb = \frac{See}{\sqrt{\sum X_1^2 - n\overline{x^2}}}$$

Where See = the standard error of estimate

$$See = \frac{\sum Y_1^2 - a\sum Y_1 - b\sum x_1 Y_1}{n-2}$$

To get $S_b$we have to get out see (standard error of estimate)

$$See = \frac{1135 - 2.57(73) - 1.28(721)}{5-2}$$

$$See = \frac{1135 - 187.61 - 922.88}{3}$$

$$See = \frac{24.51}{3}$$

$$See = 8.17$$

$$See = 2.86$$

$$Sb = \frac{2.86}{\sqrt{469 - 5(9.4)^2}}$$

$$Sb = \frac{2.86}{\sqrt{469 - 5(88.63)}}$$

$$Sb = \frac{2.86}{\sqrt{469 - 441.8}}$$

$$Sb = \frac{2.86}{\sqrt{22.2}}$$

$$Sb = \frac{2.86}{5.22}$$

$$Sb = 0.55$$

$$Z\ test = \frac{b}{Sb}$$

$$= \frac{1.28}{0.55}$$

$$= 2.33$$

Critical value of Z table as 3 degree of 5% level of significance is 0.9989

DECISION RULE:

Calculated value = 2.33

Table value = 0.9989

0.9989 < 2.33 therefore we reject the null hypothesis (Ho). This means that the prevailing economic parameters influences the stock assessment methods used by Nigeria production companies.

HYPOTHESIS THREE

H_{03}: The variances in stock assessment methods does not affect financial data positions of Nigerian production companies.

H_{13}: The variances in stock assessment methods affects financial data positions of Nigerian production companies.

The researcher used the responses in question three to test is hypothesis. Presented below is the data collected:

Table 4.2.3

RESPONDENTS	X_I	Y_I	X_I^2	Y_I^2	X_IY_I
ACCOUNTANTS	11	20	121	400	220
MANAGERS	6	14	36	196	84
DIRECTORS	13	18	169	324	234
STAKEHOLDERS	8	12	64	144	96
MARKETERS	7	11	49	121	77
TOTAL	∑ **45**	**∑75**	**∑439**	**∑1185**	∑

$$\overline{X} = \frac{45}{5} = 9$$

$$\overline{Y} = \frac{75}{5} = 15$$

Formular:

$$\boldsymbol{b = \frac{\sum X_1 Y_1 - n\overline{X}\overline{Y}}{\sum X_1^2 - n\overline{X^2}}}$$

$$\boldsymbol{a = \overline{Y} - b\overline{X}}$$

$$\boldsymbol{b = \frac{711 - 5(9)(15)}{439 - 5(9)^2}}$$

$$\boldsymbol{b = \frac{711 - 675}{439 - 5(81)}}$$

$$\boldsymbol{b = \frac{711 - 675}{439 - 405}}$$

$$\boldsymbol{b = \frac{36}{34}}$$

$$\boldsymbol{b = 1.06}$$

$$\boldsymbol{a = 15 - 1.06(9)}$$

$$\boldsymbol{a = 15 - 9.54}$$

$$\boldsymbol{a = 5.46}$$

$$\boldsymbol{Y = a + b}$$

$$\boldsymbol{Y = 5.46 + 1.06}$$

$$\boldsymbol{Y = 6.52}$$

Testing the significance of b

$$S_b = \frac{S_{ee}}{\sqrt{\sum x^2 - n\overline{x^2}}}$$

Where See = the standard error of estimate

$$S_{ee} = \frac{\sum Y^2 - a\sum Y - b\sum xY}{n - 2}$$

To get Sbwe have to get out see (standard error of estimate)

$$S_{ee} = \frac{1185 - 5.46(75) - 1.06(711)}{5 - 2}$$

$$S_{ee} = \frac{1185 - 409.5 - 753.66}{3}$$

$$S_{ee} = \frac{21.84}{3}$$

$$S_{ee} = 7.28$$

$$S_{ee} = 2.7$$

$$S_b = \frac{2.7}{\sqrt{439 - 5(9)^2}}$$

$$S_b = \frac{2.7}{\sqrt{439 - 5(81)}}$$

$$S_b = \frac{2.7}{\sqrt{439 - 405}}$$

$$S_b = \frac{2.7}{\sqrt{34}}$$

$$S_b = \frac{2.7}{5.83}$$

$$S_b = 0.46$$

$$Z \text{ test} = \frac{b}{S_b}$$

$$= \frac{1.06}{0.46}$$

$$= 2.30$$

Critical value of Z table as 3 degree of 5% level of significance is 0.9989

DECISION RULE:

Calculated value = 2.30

Table value = 0.9989

0.9989 < 2.30 therefore we reject the null hypothesis (Ho). This means that the variances in stock assessment methods affect financial data positions of Nigeria production companies.

RECOMMENDATIONS

There are several factors that make the application of a particular method of stock assessment impossible, and the need for consistency in a particular method in order to enhance comparison of achievement attained in a period with that of the previous periods.

Therefore the SAS 4 issued by the NASB seeks to bridge the gap that subsists in the use of diverse stock assessment methods by setting a standard for the valuation and presentation of items of stock in the context of historical cost conventions. This Nigeria accounting standard board (NASB) however selects some method to be used in evaluating inventory and those selected methods are applicable under certain situations.

As noted earlier, the FIFO method is good for tax purposes during inflationary periods while the LIFO

method is good for tax purposes for tax purposes during periods of falling prices.

Nevertheless, the average price method which is a midway between LIFO, FIFO and the standard price method could be more realistic in face of modern economic trends. The average method will also have the benefit of acting as an equalizer between factor inputs costs and factor outputs value so that tax authority do not exploit the business unnecessarily. Therefore, there would be a balancebetween the benefits accruing to the tax authority and the owners of a firm without either of the party being better or worst off at the expense of the other.

Another justification for recommending the weighted average method is on the ground that the method tends to smoothen price fluctuations, thus making input cost of products appear realistic.

As a result of the fact that the use of diverse method of stock assessment and data gives rise to wide disparity in the financial results of a companies operations, it is recommended that financial statement disclose in the notes to the accounts the method applied, and any change from the previous method used. This recommendation is in accordance with SAS 1and SAS 4.

We finally recommended the use of the weighted average method of valuing inventory. The reason being that, it does not give rise to any unrealized profit and it will enhance uniformity in presentation of a true and fair view of the statement of affairs and to highlight the hybrid effect of other methods such as standard price, LIFO and FIFO methods.

The accountancy professional bodies and accounting regulatory authorities are hereby called upon to examine critically the issue of using the average price method as the acceptable stock valuation model.

CONCLUSION

This research work was directed towards a comparative analysis or review of the different stock assessment methods and their impact on the financial statements. The findings amongst other things reveal that factor such as custom of the firm, auditor‟s advice to client, taxation, convenience, nature of stock, lack of relevant information, etc might influence the decision regarding the choice of a method.

This decision will vary depending on the opinion or attitude of those who are responsible for valuing inventory in a company or enterprise.

It is pertinent to assert that pending the general acceptance and adoption of the researcher‟s recommendation by the Nigerian Accounting Standard Board and other Accounting Professional Standard making bodies, that any method of valuation could be applied. The reason being that there is no one universally accepted method of stock assessment yet.

Furthermore, the over- riding consideration in a choice of method in all circumstances is the need to give a “true and fair view” of a state of affairs of an entity. It is therefore very important for organizations to be consistent in the application of a specific method from time to time unless changes in circumstances have prevented such consistency; however where there is a change from aparticular method to another, the disclosure of such change of method is of paramount importance.

Finally, the Accounting professional bodies should put the recommendation of making weighted average method of stock assessment a recommended method for production companies into consideration in an attempt to evolve an acceptable and more realistic method of valuing inventories.

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